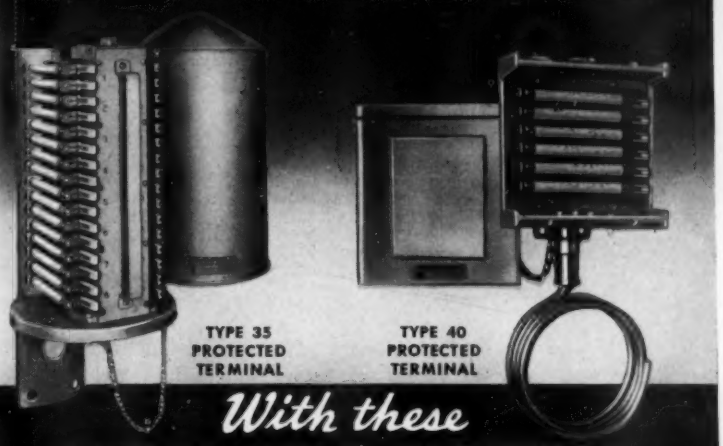
Safeguard Precious Cables



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TELEPHONY

The Journal of the Telephone Industry

JULY 8, 1944

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IN THIS ISSUE

MICROWAVES, RECORDERS AND RURAL TELEPHONE SERVICE. 10
By B. C. Burden

THIS LINE'S IN TO STAY..... 13
By Maj. James R. Addington

IN THE NATION'S CAPITAL..... 17
By Francis X. Welch

THE PLANT MAN'S NOTEBOOK. 24
By Ray Blain

THE OPERATOR'S CORNER..... 26
By Mayme Workman

NEW ORDER ISSUED ON "LEARNER" WAGE RATES.... 28

COURTS AND COMMISSIONS.... 30

★ ★ ★

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For Telephone People

• These newspaper clippings tell a real story of how telephone companies throughout the country have taken one of their vital "war time" messages to the public! While these advertisements stress the need of conserving critical materials today, they are actually doing a longer range job of subscriber education. For the text of these advertisements makes a strong appeal to the public in the interest of handling telephone instruments with care and thoughtfulness . . . thereby reducing damage and breakage.

Supplying mats of these newspaper advertisements is but one of a number of important helps which Kellogg has made available to the industry. Many, many telephone men are telling how downright practical these special Kellogg services have been to them. Each was obviously developed to serve a specific purpose or meet a special need. Each was the result of Kellogg's intimate acquaintance with your problems.

This is so with Kellogg's Maintenance Service; the sum total of experienced telephone men's advice on how to keep existing equipment going for the duration. It is so with Kellogg's Priorities Service, set up to aid you get essential materials and supplies. So it is with all the other Kellogg Aids, several of which are outlined to the right and below.

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Kellogg Outside Plant Engineering Service, offered to telephone men who want expert counsel on problems connected with the engineering, construction and maintenance of outside plant.

Kellogg Rebuilding and Repair Service, the practical way to extend the useful life of telephones, switchboards, etc.

Kellogg Surplus Inventory Service, to help you buy or sell surplus equipment.

Kellogg Public Relations Service—an advertising mat service offered at nominal cost, and designed to help you tell your community of the essential services you perform.

Kellogg Maintenance Service, developed to help you maintain service with existing equipment.

Kellogg Priorities Service, to help you secure materials and supplies you urgently need.

Britain's Signal Center Vital in D-Day Activities

A British-American-Canadian communications center of the dimensions of a small town was busily at work 100 feet under the quiet English countryside controlling the assault on Cherbourg, France. Its first great function was to transmit orders for the invasion of Normandy, but its construction had been launched two years before D-day.

Its scope is such that in one area alone the British post office laid 2,000,000 miles of wire. It is equipped to communicate with the nearest front-line shell crater in Normandy or eventually with the point where the Anglo-American armies will meet those of Russia.

An all-services undertaking, its 100 teleprinters and switchboard, and its 14-position telephone switchboard with 200 lines and 400 extensions are operated by Wrens, Ats and Waafs. A separate radio room, manned by Royal Signal and United States Army Signal Corps operators, provides a special link, enabling field troops to summon air support. A battle in France can be directed from this center completely by radio.

The first cross-Channel signal received on D-day was at 6:35 a. m., asking American aircraft to stop laying smoke screens. On the British links the wireless silence was not broken until 7:32 a. m., when anxiety concerning the fate of the airborne troops was relieved by a message from the Sixth Airborne Division.

This giant communications center has now cast its tentacles across the Channel. One schedule, anticipating the progress to be made for a certain date after D-day, called for 700 miles of eight-wire lines, 1,500 miles of special pole line, 30,000 miles of field cable, 400,000 yards of assault cable and 50 special radio installations.

V V

Fireman Rescues Telephone From Burning House

At Newburg, Wis., a man followed the first truck to a rural fire. A farm house was burning fiercely and there was no hope of saving it. Firemen and neighbors were removing all furnishings from the rooms not yet touched by the fire.

The telephone was located on a wall near the door. The interested spectator, wanting to leave it available for use as long as possible, loosened the screws, but did not immediately remove the instrument. As he walked out of the building, he heard someone behind him.

He turned and saw a fireman—with the telephone in his arms!

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MICROWAVES, RECORDERS

And Rural Telephone Service

By B. C. BURDEN, Engineer
U. S. Independent Telephone Association

In an address before the recent Executives' Conference of the USITA, Mr. Burden told of trends in communications and how they might affect future telephone service.

IN CONSIDERING the general subject of the effect of new developments on the telephone industry, I find in conversation and articles a tendency to pooh-pooh the possibility of technical developments playing an important part in our postwar activity.

I certainly agree with those who say radio and electronics will not revolutionize our business, but let's not play ostrich to the possibilities of electronics and radio playing a very important supplemental part in our future operations.

Microwaves

The most interesting electronic technical trend at this time is the development of microwaves for general communication purposes. Activity in this field has been so great the past year that one would almost think that microwaves are a new discovery.

Actually, experimental work has been going on in this field for the past 10 years. Before discussing the possible effect of these ultra short waves on the telephone business, it might be well to orient ourselves with reference to what is meant by microwaves. No doubt most telephone men are familiar with the fact that as the frequency of a radio signal is increased, its wave length decreases. In the broadcast band the waves used range from 650 to 1,800 feet in length, with corresponding frequencies of 1,500,000 to 550,000 cycles per second. Below this broadcast band we have what we call the short wave band and below this short wave band we have what we might call the microwave band.

Now, there is no sharp line of demarkation between the short waves below the broadcast band, and the so-called microwaves. For purposes of our discussion, however, we may consider anything above 300,000,000 cycles (300 megacycles) as being in the microwave region. Now a 300 megacycle wave is approximately 100 centimeters long, which is about three feet in length.

If we consider 300 megacycles with its three-foot wave as being at the low frequency end of the microwave band we might take 15,000 megacycles as the high frequency or top of this band. We find that at this high frequency end our wave has shrunk to 0.78 of an inch.

Usable Characteristics

In other words, these waves, which may have some application in the telephone business, range from the length of a yardstick down to a wave so short we could carry it around in our vest-pockets. The characteristics which make them possible competitors of wire lines are:

(1) They can be focused or beamed from one point to another in much the same manner as light.

(2) They operate on a "limited range" basis. That is, they do not radiate efficiently beyond line of sight distances, hence the same frequencies can be assigned over and over in different sections of the country.

(3) Because of the short wave-length involved, the antenna structures need not be much longer than ordinary telephone crossarms.

(4) A large number of new channels have been opened due to developments in the microwave band.

Application of Microwaves

In my opinion, the most promising application of these microwaves would be for use in serving farm subscribers in sparsely settled rural districts, where wire lines could not economically be built and maintained.

There are thousands of farms in the United States today that need telephone service, but because of the distance involved they cannot feasibly be served by wire lines. Microwave radio links should not and will not replace rural lines but only supplement them. Microwave radio channels would also enable this type of subscriber to be served with minimum investment.

The extensive development of rural power lines makes the use of microwave farm telephones more practical, as a source of power is available to operate the necessary vacuum tubes.

Another use of radio channels would be to provide direct short haul toll channels between Independent offices. There is the further possibility of using beamed radio for long haul toll circuits by interposing radio relay stations at intermediate points along the route. Whether or not such use would offer real economy would, of course, depend largely on the first cost of the radio terminal equipment.

Some quarters have recently suggested that the development of the ultra short wave channels will enable doctors, ambulances and other similar services to get exchange telephone service from an automobile. While this

is a possibility, it is far more remote than the other applications mentioned.

Current Activity in Microwave Field

Now what about the current activity in the microwave field as far as it concerns telephone companies? The Bell System has recently announced that it will construct an experimental radio relay channel or channels between New York and Boston. The proposed system will operate, so I understand, at frequencies in excess of 1,000 megacycles. Relay towers will be located at an average spacing of 30 miles. The announced purpose of this experimental system is to determine the advantage, if any, of microwave radio relay channels over coaxial and other types of cable. The Bell is also proposing, as a postwar measure, the placement of some 7,000 miles of coaxial cable. This cable would link the east and west coasts and thus furnish a number of additional toll channels as well as permit country-wide television broadcasting on a "chain" basis.

The Bell has several ultra-high frequency installations working today in the United States. One at Crisfield, Md., bridges a 10-mile water gap between the mainland and Tangier Island. The operating frequency is about 160 megacycles which means that the waves are slightly under 10 feet in length. The interesting feature of this installation is the fact that the telephones served on the island are, in effect, multi-party rural farm lines. Another and similar ultra-high frequency installation is now in use near Cape Charles. This installation consists in bridging an overwater gap of about 20 miles which would otherwise have required a long, round-about land line construction. By the use of the carrier principle applied to the radio link 12 usable toll channels are obtained.

Practical Effect of Microwaves

Now, of course, telephone men are interested in the practical effect of all this microwave talk on their business. If I were in their place I would view microwaves on this basis:

(1) I would recognize that they are unlikely to have any effect on their operations between now and the end of the war because equipment is not yet available.

(2) Microwaves have genuine supplemental application in the telephone business and every effort should be exerted to obtain frequency assignments from the FCC.

(3) On the assumption that the use of microwaves will be permitted for certain supplemental applications such as short haul toll, and to serve "hard to reach" farmers, at the very least from two to four years would probably elapse before commercial units are available. Design and field trial of such units will take time.

Inasmuch as microwaves will only supplement existing telephone facilities, we will be in the fortunate position of being able to go ahead with normal planning and construction, yet take full advantage of the possibilities of microwaves as commercial units are made available.

The United States Independent Telephone Association through membership on the Radio Technical Planning Board is keeping in close touch with current developments in the microwave field. At the appropriate time we expect to make representations to the board as to the need for frequency allocations for the supplementary purposes which I have previously mentioned.

Wire Recorder Want Ad Service

At the national convention of the USITA last October I suggested that the steel wire speech recorder had real possibilities in the telephone field. Since that time I have given the subject additional consideration and I am convinced that this simple device might well be the vehicle whereby we can regain for the rural telephone some of the popularity it once held before good roads, automobiles and the radio stepped into the picture.

Let's take a quick look at the wire recorder. First let's get fixed in mind what it is and how it works. There are two types of wire recorders—one consists of an arrangement where several thousand feet of fine steel wire is stored on a small spool. Speech can be magnetically recorded on this wire as it is run through a recording head. The wire, after passing through the recording head, runs onto an empty take-up spool. To "play back" the recorded speech, the wire must be rewound and then run back through a transcribing head. The capacity of one available machine of this type is approximately one hour, and over two miles of wire is required.

Such a machine can be used by a subscriber for recording telephone conversations for record purposes. However, it is not this machine which I feel holds forth a real application in our business.

The other wire machine consists of several hundred feet of wire arranged on drum type pulleys so that it runs as a continuous belt through the recorder and transcriber heads. That is to say, it is repetitive in its action.

In other words, here is a machine that is capable of holding only a relatively short recording, but it will repeat this recording over and over and unlike other recording media such as wax or cellulose acetate records, there is no wear and no deterioration of the quality of the recorded speech due to the repetition. Furthermore, by merely closing a switch the wire can be electrically wiped clean of its recording and a new one made.

Now, here is a device that is a natural for the telephone business. It is adapted not to the individual subscriber's telephone, but to the entire exchange.

I propose that we use this repetitive wire recorder to furnish to rural subscribers what might be called *farmers' talking wire want ad service.* This service would serve the combined purpose of furnishing weather reports and short farmer want ad announcements. Farmers would be permitted a 15-word, 10-second sales announcement for 25 cents. These announcements would run all day.

Farmers' want ads and the weather report could be recorded on the talking wire by the chief operator reading the ads into a microphone. As soon as the recording is completed, the output of the machine would be switched over to the want ad trunks. Rural subscribers wanting to know the weather report or those interested in the sales or wanted items would merely dial the want ad trunk number, or in the case of a manual board, ask the operator. The subscriber, after being connected, would then hear the recorded voice.

Farmers always have a hog, a cow, a wagon or something they want to sell. Others are equally desirous of buying these items. The farmers' want ad service would be an ideal medium for locating a hired man, or a load of hay or straw. I think the farmers would like it.

On the basis of a three-minute wire capacity, we could handle approximately 15 sales announcements, each 10 seconds long and with a two-second gap between, plus a 15-word weather report.

A typical announcement might be "10 tons fine prairie hay for sale—$8 per ton. Call Ru-9724—John Smith."

It is, of course, easy to think up a number of reasons why this proposed weather report and want ad service would not work. Some will say that the local newspapers would object and others that the farmers won't use it, but I suggest we put our energies into making it click rather than trying to disprove it without a trial.

The very least we should do with this idea is to try it out in a few representative exchanges. Let's make the rural telephone so useful that the farmers who have it will never want to give it up and those that haven't got it will be asking for service.

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Typical Philco Battery Installation, Pennsylvania Telephone Corporation, Johnstown, Pennsylvania

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This Line's in to Stay

By JAMES R. ADDINGTON
Major, Signal Corps

Now that the construction of the Alaska Highway Telephone Line is completed, the job is to keep it in service.

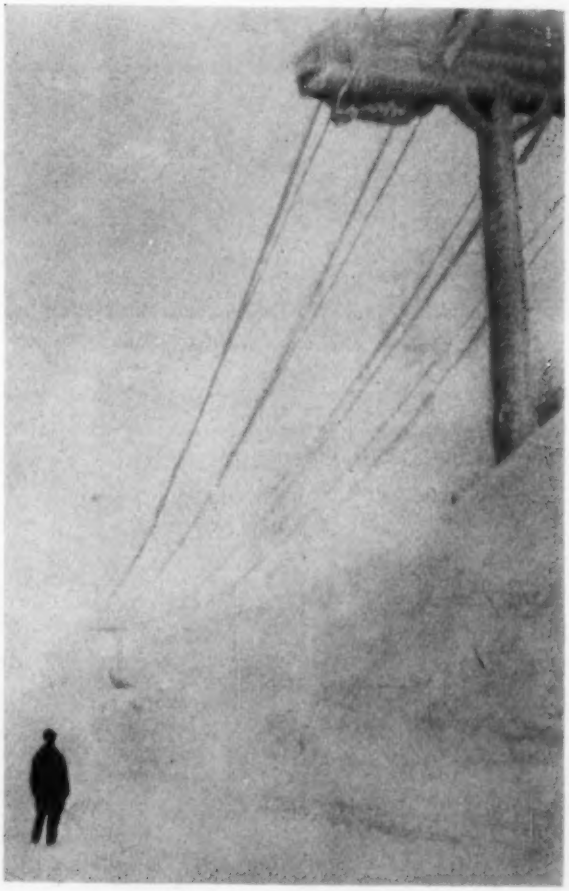
TWO THOUSAND miles of pole line, the longest open wire carrier telephone line in the world, was pushed through to completion in the fall of 1943, stretching from Edmonton, Alberta, Canada, to Fairbanks, Alaska, across the new northwestern frontier of the American continent. Spurred on by the tenacious and menacing grip of the Japanese on the Aleutian chain and the memory of Dutch Harbor, the final stage in the construction of the Alaska Highway Telephone Line was rushed through a sea of muskeg by Signal Corps troops using pack horses and equipment flown in by pontoon planes which landed on lakes along the way.

But now that the wire is through, the job is to keep the line in service. Problems of maintenance presented a gigantic task. From Fort St. John to Fairbanks, the line cut through dense timber lands, spanned countless rivers, climbed precipitous mountains, and was loosely anchored for long stretches in swampy morass, the entire length subject to breakage, fire and washout. Construction had proceeded with such urgency and speed that considerable distances were still covered only by temporary wire.

Maintenance of the line was charged to the troops of a Signal service battalion, with Lt. Col. J. R. McKinley commanding. Officers and men of this outfit had previously been closely associated with construction of the line. In the spring of 1943, with service about to be opened into Whitehorse in the Yukon, Capt. Worthy C. Riddell, who had originally set up the maintenance procedure on the first section from Edmonton to Dawson Creek, was relieved of his assignment of construction on the north end of the line, and proceeded to supervise the maintenance of the completed sections.

Repeater station equipment was being installed at this time. Soldiers who had been assigned to maintain the repeaters, as well as two linemen at each station, were on hand during the installation by civilians of the Western Electric Co., acquainting themselves with the repeater equipment and the line problems soon to be faced.

An immediate and constant threat was failure caused by falling trees. For hundreds of miles, a layer of perpetual ice lies just beneath the surface of the ground. For this reason, none of the timber along the line has a tap root. In many places, surface roots grip soft muskeg, and the giant trees, heavy with winter snow, crash down

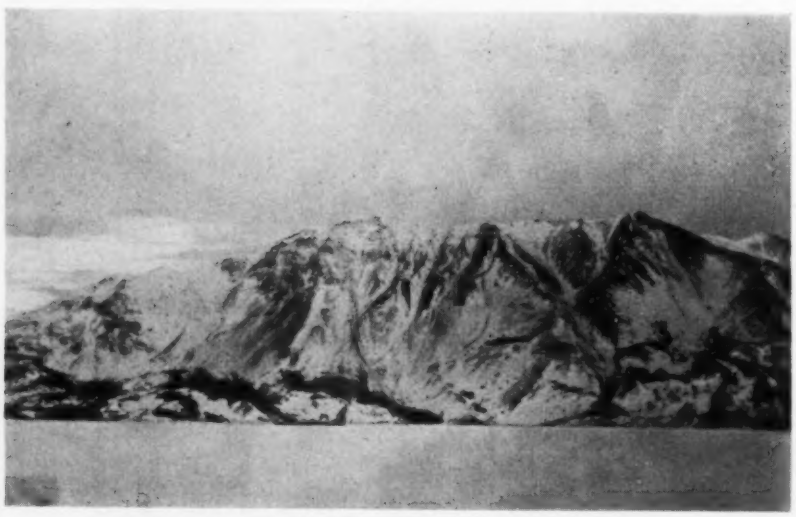


Winter photo of the Alaska Telephone Line.

Forest fire threatens Alaska Highway line.

Path dug through snow into living quarters.

Spring thaw takes bridge and telephone line.



Kluane Lake 20 miles long. Telephone line built along foot of mountain.

in defeat to the arctic elements. The pole line stretched for a thousand miles through such dense timberland along a narrow right-of-way.

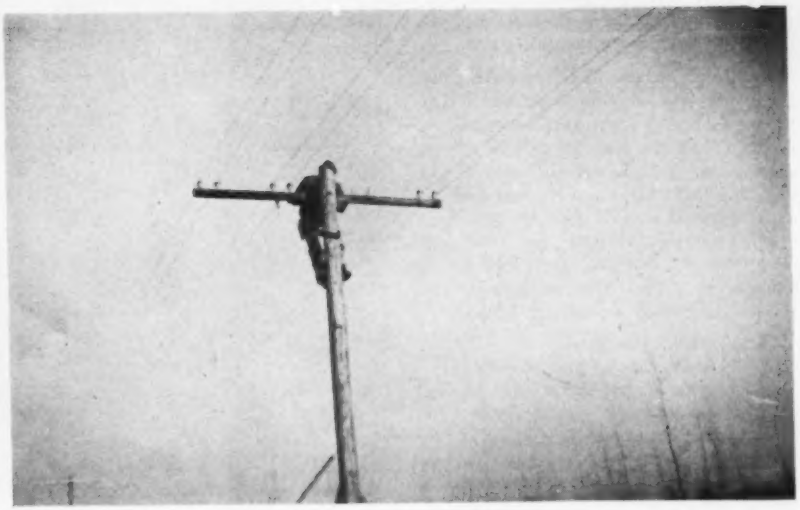
The primary mission of the two linemen stationed at each of the repeater stations, which are approximately 100 miles apart, is the immediate clearance of any trouble occurring within their assigned territory.

In addition to the two line-maintenance soldiers at each repeater location, line construction crews are also stationed at strategic points. Each crew consists of approximately 10 men with a non-commissioned officer in charge. It is their assignment to eliminate all the defects in construction due to the speed with which the line had been rushed to completion. A seemingly endless war is waged against the forest by cutting down the huge trees to widen the right of way. Possibly by 1945, the hazards of falling timber will no longer present such a serious problem.

Indian legend has it that all weather, throughout all seasons of the year, is born in the northwest. In summer, spontaneous forest fires rage through the timberlands. In the spring, melting ice and snow trickle down the huge mountainsides swelling into a thousand rushing streams before pouring into the suddenly maddened rivers. In winter, fierce winds sweep across the line in temperatures of more than 40 below.

The line was hardly in operation when three miles of it were consumed by fire 150 miles south of Whitehorse. Flames swept across this section one evening at 6:30 p.m. Signal troops worked unceasingly on hot ground all through the long arctic daylight and

Alaska highway line south of Northway in February 1944.



Signal Corps crew making line repairs.

The Alaska telephone line near Cathedral.

Signal Corps linemen working on line.

Whitehorse-Skagway line on January 28, 1944.

Replacing a pole in the line.

at seven o'clock the next morning, the line was back in full operation.

In July, floods carried away five miles of one section; various other points in the general area were struck down. With the line went washed out sections of the Alaska Highway, making the affected points inaccessible except by the most dangerous expedients. Service during the flood period was out for five days, the worst disaster thus far in the history of the Alaska Highway Telephone Line.

Sleet storms in winter subject the line to terrific pounding, besides inflicting serious hardships on Signal maintenance troops. Last winter, a sleet storm blew across 100 miles of line, building up thick coats of ice on the wires. Persistent and sometimes heroic action of linemen kept service interruptions down to a minimum.

The 103 miles of line from Whitehorse to Skagway, paralleling the route over which the gold-seekers of '98 mushed north to Dawson City through the White Pass, are probably the most difficult to maintain in the entire world. This past winter the snow in many places was 25 feet deep. At a few points, the wire was completely covered. It may be noted here that at this writing in April, the sergeant in charge of this section telephoned a request to headquarters for two motor sleds so that the crew might break through for food. Asked how things were on the line in his part of the continent, the sergeant answered: "Don't worry, sir. This line's in to stay!"

Warm moisture rising from the Linn Canal, which is part of the Pacific Ocean, freezes when it hits a certain altitude in the pass. Thick ice forms on the wire, growing heavier and heavier, until the wire breaks under the strain. Soldiers are on constant patrol, knocking the ice off the wires with clubs. Fortunately, the snow is so deep that in most places the wires are only three or four feet from the snow line.

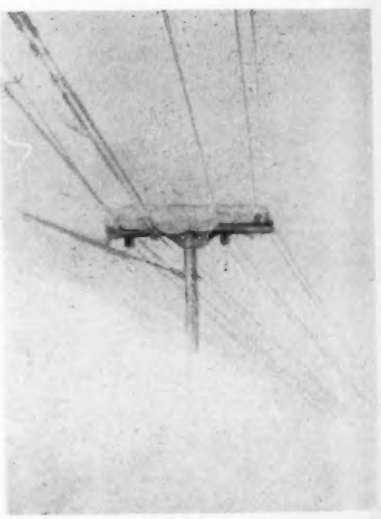
The Signal service battalion has undertaken all possible precautionary measures to guard against major failures. At many points that seem especially susceptible to line breaks, particularly at river crossings, temporary wire has already been strung along an alternate route. In the event of failure along the main section, the emergency wire can be placed into service in a few minutes. Poles, crossarms, wire, insulators and other essential materials for line restoration are in readiness at regular intervals along the highway.

The officers of this battalion, many of whom were associated with major telephone systems in civilian life, have seldom encountered such firm devotion to duty as that displayed by the linemen of the Signal service battalion. Heedless of personal risk, long grueling hours, arctic temperatures and fierce northern winds, they have often worked in emergencies without food or sleep until ready to drop from exhaustion.

No doubt the spirit of these soldiers is greatly responsible for the enviable record in maintaining the telephone line. During the month of March, 1944, only 25 cases of trouble were experienced, for which the average clearance time was one hour and 46 minutes. Considering the terrain spanned by the 2,000-mile pole line, this is a remarkable tribute to the work of these Signal Corps linemen.

The Donzac River valley.

Duke River floods valley so poles had to be cribbed with timbers.



Pole in the Whitehorse-Skagway section of line along the Yukon and White Pass Railroad. The wires are covered with snow just beyond pole.

WMC inaugurates job control program which may help telephone industry. . . . Wage-Hour administration liberalizes "learner" period regulation for operators. . . . Taxi cabs ready to use two-way communications. . . . Suit on hotel surcharges opened at New York City.

THE FIRST of July witnessed the inauguration of the War Manpower Commission's (WMC) "job control program." Telephone companies stand to gain some relief, theoretically at least, in their personnel problems by way of establishing their employment through the restrictive controls of the WMC. Whether as a practical matter it will have any such effect remains to be seen.

After all, the WMC "job control," although nominally effective on a nationwide basis, applies to female employes only in certain areas in the following states: Connecticut, Massachusetts, New Hampshire, Rhode Island, New Jersey, Delaware, Ohio, Florida, Georgia, Mississippi, Tennessee, South Carolina, Nevada, Oregon, Arizona, California and the District of Columbia.

What is this all about? Well, the general idea is to prevent employes of essential industries such as munition plants, shipyards or public utilities (including telephone companies) from shifting over into non-essential business such as beauty parlors, liquor stores, florist shops, and so forth. By the same token, the WMC plan is designed to encourage people who are now employed in the less essential lines (liquor stores, etc.) to shift over into jobs with shipyards, public utilities, and so forth.

The technique of the plan has a perfectly hideous name which scarcely gives any clue whatever to how it works. It is called the "priority referral system." To this observer, that name meant about as much as if they had called it "rondo caprioso." That is Washington for you — never use a simple name when a complicated and baffling substitute can be found.

The system is briefly this: A manpower priorities committee establishes "ceilings" on the number of employes each employer in the area may hire. In practice the ceilings simply freeze the status quo as of a specific date, but they are subject to reduction should the labor situation require it. The committee also sets up a plant labor priority list in the essential industry field to guide the United States Employment Service in the "referral" of workers to jobs. A series of broad regulations provide that virtually all hiring be done through the employment service. In particular, all workers in essential industries, men and women, and all "immigrant" workers are barred from new employment except on "referral" by, or under, arrangements with the employment service.

As the WMC applies that system to all critical areas, it adds a new order tightening the original regulations for those areas and impartially covering the entire country. This extends its controls to all male workers whether they hold essential or non-essential jobs. *But there is nothing to prevent a worker from simply refusing to work, officially, or from picking up a living, unofficially, in a labor black market.*

For the telephone industry it must be kept in mind that the new WMC plan applies only to *male* workers, except in specified areas in the group of states listed above. If you do not operate in any of these states, then the WMC "job control" does not apply to your female employes. And even in those states, there are some areas which are still free from WMC control over female employes.

Perhaps this latest extension of WMC's program will turn the trick of keeping necessary manpower at jobs necessary to maintain the national war effort, and maybe attract a few more hands from the less essential jobs. The real test will be in the production figures for the next few months. The report for May, just released by the War Production Board, shows that improvement is both possible and imperative in many vital categories. The new rules boil down in final analysis to nothing more than another tightening of the

"voluntary" pressures on employment in the hope that a bigger proportion of the available labor can thus be directed into essential war work. They represent another stopgap move, another makeshift effort to meet the manpower situation without facing it firmly.

What is lacking, as it has been from the beginning, is the authority to back up the fine-sounding regulations which the WMC continues to issue so optimistically. It is doubtful whether anything short of a genuine labor draft will prove to be really satisfactory.

* * *

Following his recent decision imposing the 40-cents-an-hour minimum wage on the communication industries, the Wage-Hour Administrator has liberalized, to some extent, the "learner" period during which less than 40 cents an hour may be paid to apprentice operators in certain telephone exchanges. Under the regulations promulgated June 26, the total or maximum learning period during which sub-minimum wages may be paid operators by Independent telephone exchanges subject to the Wage-Hour Law is 480 hours. Effective date is July 17, 1944.

The learner hourly rates during this period may be as follows: Not less than 30 cents per hour for the first 320 hours, and 35 cents per hour for the remaining 160 hours of the learning period. This provision is applicable only to the Independent telephone industry. Upon application to the Wage-Hour Administrator, special certificates authorizing the employment, at sub-minimum wage rates, of learners may be issued to "exchanges of less than 2,000 stations to the extent necessary to prevent curtailment of opportunities for employment and to exchanges of 2,000 or more stations when unusual circumstances are shown to exist, which . . . would curtail opportunities for employment under terms herein set forth."

In other words, the learner wages are not automatically available to any Independent telephone company which feels like applying them. Here are the conditions under which the sub-minimum wages can be paid to "learner" employes:

(1) The employer must be an Independent telephone company subject to the Wage-Hour Law. That means, of course, a company not controlled by the Bell System. [NOTE: *Telephone exchanges having less than 500 stations are exempt from the "learner" wage order as operators in such exchanges are exempt from all provisions of the Wage-Hour Law.*]

(2) *The provisions apply only to switchboard operators* — a "learner" being a person who has had less than 480 hours of employment as a commercial switchboard operator.

(3) The company must apply for a special certificate on forms furnished by the Wage-Hour Division. Until this certificate is issued the company may not pay less than the 40-cent minimum wage. When it is issued the certificate sets forth the various terms of the "learner" employment and must be kept posted in a conspicuous place. It is also subject to cancellation upon any violation of its terms.

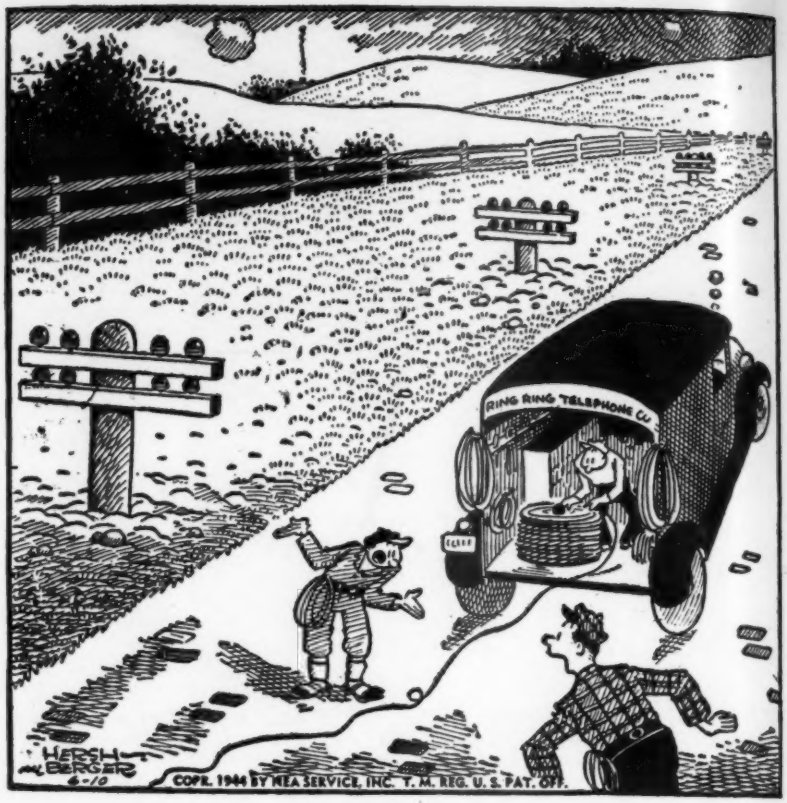
(4) If the application for such a certificate is for an exchange having less than 2,000 stations, the Wage-Hour Administration will issue the certificate provided it appears that:

(a) Experienced operators are not available;

(b) The issuance of the certificate will not impair established wage hour working standards;

(c) No unfair competitive labor cost advantage will be created.

(5) Where the application for such a certificate is for an exchange of more than 2,000 stations, it is further necessary for the Wage-Hour Administrator, or his authorized representative, to make an affirmative finding that unusual circumstances exist by which the issuance of the certificate is necessary to prevent the curtailment of opportunities for employment. (See text of "learners" wage order on other pages of this issue).



(Courtesy, NEA SERVICE, INC.)

"Who hired an oil well driller to dig the post holes?"

Postwar planning for radio-telephone business is really getting hot. In this department last week there was some comment about plans being made on behalf of the telephone industry itself to bring postwar development of radio point-to-point communication service within the control and in coordination with established telephone land wire facilities. This is looking forward principally to the "automobile telephone" for both local community service and interurban highway service—making it possible for cars or trucks on the road, or doctors running around town, to talk with any regular telephone subscriber over a combination of radio and land wire facilities.

But some radio manufacturers, on the other hand, would like to see control of this unborn public service established, in part at least, distinct from the telephone industry. Some definite news along this line came out of Philadelphia last week and has already caused some wrinkled brows over at the Federal Communications Commission in Washington. After all, it is the FCC in the final analysis which will have to decide, through its approval and assignment of frequencies, whether the new mobile radio point-to-point

(Please turn to page 22)

COOK TYPE UX

Cable Terminal

Designed to facilitate installation and service in manhole termination and distribution of underground cable systems, the Type UX Cable Terminal (unprotected) combines many features which have made it popular with telephone men everywhere.

The lateral cable enters through a well in the cable chamber into which solder is puddled so that a strong, moisture-proof connection is made. A patented metal strap on the mounting bracket clamps the cable to prevent injury to the cable at the joint between the cable and terminal. The terminal may be mounted with cable stub out of top or bottom.

The terminal provides for service outlets. These outlets in the sides of the terminal are sealed with a brass pipe plug having a ⅜" pipe thread. Lead sheath of instrument distribution cables are terminated in heavy brass stuffing boxes set in the service outlets. The face plate is made of a single piece of moulded bakelite of great strength, low moisture absorption, and high electrical resistance under all conditions.

ARMY (E) NAVY

COOK ELECTRIC Company

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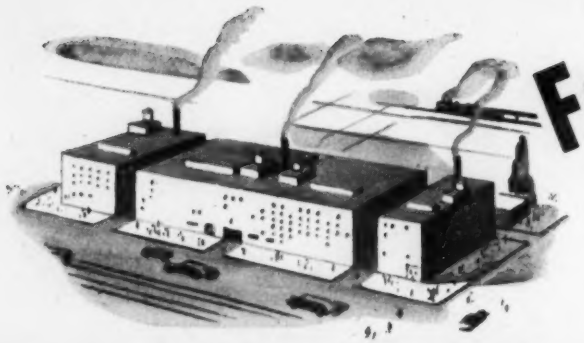

From skilled hand to skilled hand

Here at Automatic Electric women fine communication equipment making by our armed forces.

Across the seas, other hand skilled i are using this apparatus to m move fire, to coordinate attack and ack.

While we are maintaining tion of telephone operating men are ssly at keeping their facilities operati ficienc the excellent job they are do r cou struction, transmission, rebuild ainten consult with our representative direc

The Army-Navy "E" Pennant, with three stars for continued achievement in production flies over the plant of Automatic Electric Company.

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Electric women long skilled in producing
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s to m movement, to direct artillery
k and back.

aining tion of this essential equipment,
n are wisely at the equally vital task of
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are doing counsel on engineering, con-
rebuild aintenance. If you need help,
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Photo by U. S. Army Signal Corps

For Fighting Power Today—
For Buying Power Tomorrow—
Buy *Extra* War Bonds

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NATIO ATIC ELECTRIC CORPORATION

communication development will be established on a purely radio basis or on a mixed telephone and radio combination basis. Or perhaps a little of both for various categories of service.

The Philadelphia story is just this: The Cab Research Bureau, backed by the National Association of Taxicab Owners and General Electric Co., is pioneering plans for the installation of two-way radio communication equipment in taxicabs after the war. It has progressed to the point where the only obstacle to be overcome is the approval and assignment of radio frequencies by the FCC.

Before the United States entered the war, the FCC had licensed approximately 15,000 sets of emergency radio communication equipment for police departments, fire departments, marine fire departments, forestry and public utility companies with an aggregate value of about $15,000,000.

D. Lee Chesnut, director of the emergency communication equipment section of General Electric, estimates that in the first year alone, after the war, there will be a market for 15,000 sets of taxicab communication equipment. The potential market for this equipment is indicated by the Office of Defense Transportation estimate that there are 70,000 taxicabs in the country. There are approximately 51,000 taxicabs in large cities. Approximately 25,000 police radio cars constituted the largest pre-war market for this type of equipment.

Taxicab companies in 17 large cities have requested Mr. Chesnut and a group of other General Electric engineers to make surveys to determine the services that would be afforded by two-way radio communication, to estimate costs, and to lay out transmitting facilities and to suggest appropriate wave bands.

Surveys already have been completed in Cleveland and Philadelphia. Among the other cities requesting surveys are Columbus (Ohio), Chicago, San Francisco, Louisville and Los Angeles. Both the Yellow Cab Co. of Cleveland and the Yellow Cab Co. of Philadelphia have definitely indicated that they plan to install two-way radio communication systems in their cabs after the war if FCC approval is granted.

The radio-control system developed by General Electric contemplates the use of frequency modulation equipment in the 300-megacycle to 500-megacycle bands. General Electric has already installed transmitting equipment in the 330-megacycle band and the company suggested this high band for use by the cab companies in order to leave the lower FM bands open to emergency communication equipment.

In this radio-control system each taxicab would be equipped with a two-way radio. Transmitting stations would be established in several sections of the city and all would be hooked up with a central control station into which the calls for the cabs would come by telephone as at present. Drivers and control stations could keep in touch with each other at all times. The number of transmitting stations would be determined by the size of the city. In Cleveland three stations would be necessary while Philadelphia would require five stations.

The equipment would be a special frequency modulation variety which would enable the dispatchers to talk to each taxicab individually without being overheard by any other taxicab of any other radio listener. Two-way operation of the cab fleet would enable the cab company to respond almost instantly to emergency calls from patrons located in any section of the city.

An integral part of the plan will be a hook-up between radio control rooms of the police department and the taxicab company. In this connection, the cab companies could make available to the city officials their fleets of cabs for assistance in disasters.

It must be kept in mind that this two-way taxicab radio set up would be a locally exclusive communication frequency—to the extent that any radio communication can be made locally exclusive by restricting the frequency for a particular use. By that is meant that the particular cab will be talking back and forth with headquarters on one frequency while another cab will use another frequency, and neither cab will hear the other's conversation. We can see that this is unlike the present system of police radio communication which simply broadcasts a series of announcements which are picked up by all squad cars.

If you have ever listened over your shortwave radio to police announcements you have probably heard something like this:

"Calling Scout Car No. 9. Calling Scout Car No. 9. Go to Happy Hour Night Club and pick up a drunk. That is all."

"Scout Car No. 10, return to your precinct. On the way, pick up two hamburger sandwiches, one with mustard. That is all."

You can see that both scout cars No. 9 and No. 10 are not the only ones in on that conversation. It follows, of course, that such frequency allocations for individual use will necessarily take up a large number of frequencies. And that is one of the many technical complications of mass radio-telephone, point-to-point communication service. Use of the ultra high frequencies, however, restricts the radio reception to the "horizon area"—or about a 25-mile circle. This means the same frequency can be used at the same time over in the next county, which makes for economy in the use of frequencies.

* * *

The real test case on the validity of the FCC order forbidding hotels, clubs, and apartment houses to make any "surcharge" on long distance calls by their guests is apparently not going to take place in Washington after all. It looks as if it is going to be New York City.

Last week Federal Judge Stephen Brennan in the U. S. District Court for the Southern District of New York opened the trial of a government suit on behalf of the FCC to enjoin New York City hotels from collecting "service charges" on interstate telephone calls by guests. The suit is based on the contention that such charges are in violation of the FCC regulation which provides fixed rates for toll calls. This FCC "anti-surcharge" order has already been upheld by the U. S. District Court in the District of Columbia in an opinion handed down some weeks ago by Federal Judge O'Donoghue. But since that time the hotels around Washington have not indicated that they are going to take an appeal to the U. S. Court of Appeals for the District of Columbia —a step which would be necessary if there is ever going to be any U. S. Supreme Court decision on the subject. It is more likely, however, that the New York hotel people are prepared to battle the case in that district at least to the second U. S. Circuit Court, if the district court decision is against them.

* * *

Readers may recall that this department, several weeks ago, predicted that the Republicans in Congress had given up hope of making any real headway with pending investigation or legislation affecting the FCC. Instead, they seemed to be "saving" the controversy for a campaign issue. Well, now it is official. In its 1944 platform, the national Republican Party has the following "plank" with respect to FCC:

"We insistently condemn any tendency to regard the press or the radio as instruments of the administration and the use of government publicity agencies for partisan ends. We need a new radio law which will define, in clear and unmistakable language, the role of the Federal Communications Commission."

Rochester Company Publishes Letter of Explanation

In an attractive advertisement, the Rochester (N.Y.) Telephone Corp. in a diplomatically worded letter signed by John P. Boylan, president, told the Rochester public on June 21 why it is impossible for the company to render service to new applicants.

The headline of the advertisement read: "How soon can a telephone be put in my home? President of the Rochester Telephone Corp. answers this question." The answering letter appeared as follows.

To the Public:

Perhaps you filed an application for a telephone in your home months ago and wonder why it hasn't been installed. Today, there are more than 3,000 others who are waiting for a telephone.

This is not neglect, nor indifference, on our part. Realizing the vital need for a telephone in so many homes, no one regrets this distressing condition more than your telephone company.

The main reason we haven't put in your telephone is we haven't the equipment. Also, adequate exchange facilities may not be available in the area in which you live.

Except for military use, there hasn't been any telephone equipment made since 1942. There's a drastic shortage of all kinds of equipment—instruments, wires and cables.

Subscribers who move can't even be sure of retaining their telephone service. Before you move, let us know your future address, so we can tell you whether we can provide service.

When our men will get to your home depends on the amount of equipment we can secure for home installations. Rest assured, we will do everything we can to fill as many of the 3,000 orders we have on hand as quickly as possible.

Frankly, persons who apply for home telephones now cannot expect service for many months. Applications will be honored in the order they're received, depending on the amount of equipment or facilities that will become available.

Meanwhile, we will appreciate continuance of the patience and consideration you have shown during this period of war-handicapped telephone service.

V V

War Fund Official

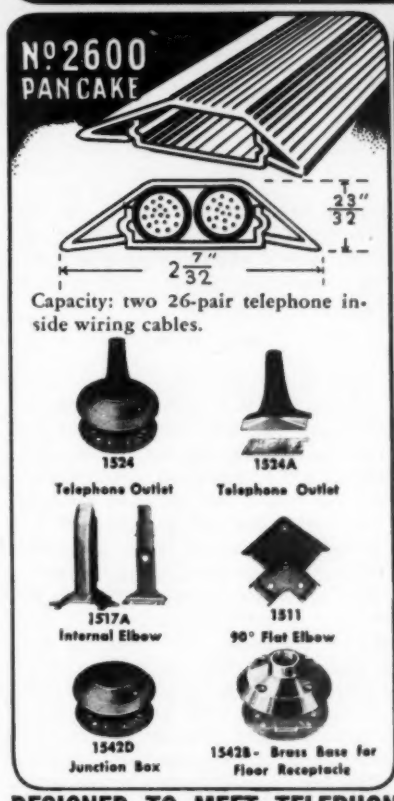
FRANKLIN H. KENWORTHY, vice president and general auditor of the Chesapeake & Potomac Telephone Co., was named vice chairman June 24 of the business unit for the Community War Fund campaign in Washington, D. C. next October. He is first of three vice chairmen appointed to direct solicitations from business houses.

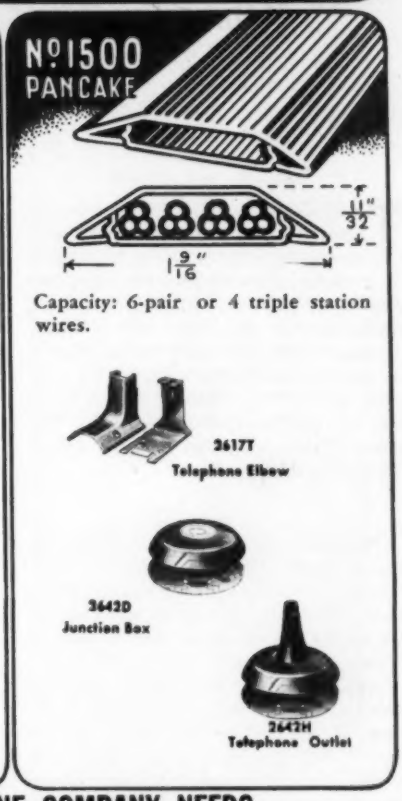
BUY BONDS

FOR VICTORY

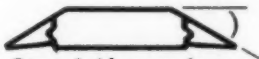
FOR OVER-FLOOR TELEPHONE WIRING SYSTEMS

PANCAKE WIREMOLD





DESIGNED TO MEET TELEPHONE COMPANY NEEDS AND SPECIFICATIONS . .


Cover held securely to base. Low ramp angle.

Securely held twistouts for 1500 or 2600

Important features include . . . cover held positively to base . . . trip-proof cross section with minimum ramp angle . . . sturdy fittings with twistouts held securely in three places . . . raceway furnished in 10 ft. lengths . . . raceway base provided with screw knockouts located on 8½" centers.

Write for Telephone Installation data sheets and descriptive bulletins direct to The Wiremold Co., Hartford 10, Conn.

WIREMOLD IT!

FOR SPEED – SAFETY – SERVICE

THE PLANT MAN'S NOTEBOOK

BY RAY BLAIN • TECHNICAL EDITOR

THERE has been developed recently, after 14 years of research, a windowpane with built-in insulation. It is made of two panes of glass, separated by an insulating layer of air, sealed around the edges with a metal-to-glass bond. This glass is installed in a modified single sash just like ordinary glass. It is claimed that it keeps out cold and deadens street noises. This glass will be ideal for postwar use in telephone exchanges.

* * *

Someone has likened the Independent telephone industry to a big Irish family. Independent companies may have differences among themselves, but let an outsider take a crack at one of them and the rest will rush to its rescue. The only possible exception to this in the past has been perhaps in the case of the smaller companies. Since the first of the year when TELEPHONY began emphasizing the problems of the smaller companies, more and more Independents are realizing that if the larger companies are to grow stronger, then the small companies must become and remain strong. The industry, regulatory commissions and the public must make certain that these small companies have a chance to increase their earning power in the future.

* * *

Telephone construction men are familiar with the common practice of using a nail to hold a locust pin in the crossarm. We have a complaint that these nails are difficult to remove when the regular pins must be replaced by a point-type transposition bracket. The use of a double-headed nail of the type commonly used to build scaffolds and concrete forms has been proposed and rejected as it is believed that the extended heads would catch on the lineman's clothes. We would like to hear from anyone who has experienced difficulty with this feature and to learn how it was overcome.

* * *

We frequently hear remarks which indicate that it is planned to organize telephone construction companies during the postwar period. These companies will be equipped with necessary tools to handle outside plant construction, both aerial and underground. Undoubtedly, some of these companies will also be equipped to handle central office equipment installation. This will provide an ideal arrangement for telephone companies that do not have enough construction work to pay them to maintain the necessary tools in order to handle this work properly. These companies may contract for all such work with the construction concerns. This arrangement will also permit a better grade of work, because the contractor will employ specialists in each line who will be familiar with the latest construction practices.

* * *

The Pennsylvania Railroad, with Union Switch & Signal Co., is working out a practical telephone system for use on trains. This follows prolonged investigation by leading telephone, radio and electronic experts. An experimental installation is now in use on the Belvidere-Delaware branch and will be extended as developments warrant.

* * *

Pole suppliers inform us that there is no real shortage of pole timber, but the reason they are not always able to make deliveries to their civilian customers is due to the acute labor shortage plus terrific demands of the armed services. When the story of this war is told, the part which the pole suppliers have played in the winning of our complete victory will make mighty interesting reading.

* * *

The amphibian tractor has been dubbed the noisiest, roughest and most unstoppable vehicle yet devised for battle.

* * *

Japanese efforts to interrupt American communications during the occupation of Attu went so far that at least one Jap soldier actually bit a Signal Corps telephone line, according to a War Department report. In one instance during the fighting on Attu, a dead Japanese soldier was found, his body stiff, both hands clutching a field line, with a section of wire still gritted between his teeth. He had stripped off six or more inches of insulation, effectively shorting the line.

No evidence was found of effective use of radio by the Japanese on the island. They seemed to rely entirely on telephone lines and runners.

The enemy placed strong emphasis on the disruption of our communications. Our soldiers could traverse wide areas known to be infested by enemy snipers without receiving a single shot. Let a single soldier stop, however, and appear to be repairing a break in a telephone line, and enemy sniper's bullets would begin to whistle all around him.

* * *

Linemen schools in the armed services make use of untreated soft wood poles to teach men to climb. After they have learned how to handle their

hooks and have gained confidence they are switched to hard treated poles. It is claimed that this method is better than starting uninitiated, green men on the hard pole first.

* * *

It would seem desirable to redesign the cable suspension clamp and bring it up to date. No doubt it would be possible to equip this clamp with a protective guard and a means of anchoring lashing wire when used with the spinner method of cable suspension.

* * *

According to the Chesapeake & Potomac *Transmitter*, the Red Cross, through a network of telephone, telegraph, cable and radio facilities, handles more than 20,000 messages a month for servicemen in the war zones and for their families at home. Some 2,000 of these concern prisoners of war in Europe.

* * *

The Plant Committee of the United States Independent Telephone Association is to be complimented on a job well done in issuing its booklet entitled "Project Study No. 1, Spinner Method of Cable Suspension." This study contains a wealth of information on the subject and should prove valuable to all Independent telephone companies.

* * *

The Chief Signal Officer of the Army, Maj. Gen. Harry C. Ingles, upon his return from a five-week tour through the Pacific area stated, "Incidentally, communication equipment takes an awful beating in unloading. There are no piers or docks at any of those places. The equipment comes in on a ship and is taken off on a net, run to shore on a barge, picked up on a net again in the driving rain, and landed on the beach. There is no shelter. It lays on the beach in the rain sometimes for a month or so.

"There is one other thing I might mention to you," he continued, "and that concerns pictures and films from the theaters of operation. We have secured a sizeable amount of good combat footage from the Pacific theater. I was very much pleased with the attitude of the cameramen. Believe me, I take off my hat to them. They go ashore with the first wave, and they have, I think, a job that takes more courage than an infantryman going ashore with an automatic rifle in his hand. In addition to a camera, they carry a carbine across their backs."

Alabama Association Receives War Certificate

Designed as a testimonial to organizations and individuals who have performed outstanding services beyond the normal requirements of duty, the U. S. Army Chief Signal Officer's Certificate of Appreciation has been awarded the Alabama Independent Telephone Association, according to a recent letter received by Minor Corman, president of the association, from Maj. Gen. H. C. Ingles, Chief Signal Officer.

The Alabama Independent Telephone Association was among the organizations which participated in a vast recruitment plan during the early days of the war when specialized communications personnel was vitally needed by the Signal Corps in a period of unprecedented expansion. This large scale recruiting was done under what is known as the affiliated plan. Large organizations recruited entire signal units from within their own employes and in most cases supplied both officers and enlisted personnel.

The certificate which cites the Alabama Independent Telephone Association "for loyal and patriotic services rendered the Signal Corps of the Army of The United States" will be presented to Mr. Corman by Col. F. J. Magee, signal officer of the Fourth Service Command at a brief ceremony to be held in Montgomery, Ala., on July 10.

V V

Accepts Managerial Position

ORIN HOVE recently accepted the position as manager of the Ridgeway, Iowa, exchange of the Lincoln Telephone & Telegraph Co. beginning July 1. He succeeds MRS. CARRIE JOHNSON, who resigned.

V V

Use Under-Channel Cable

A special telephone cable laid under the English Channel since the invasion is now in use, it was disclosed June 28. The first call was from an R. A. F. Normandy base to the office of Air Chief Marshal Trafford L. Leigh-Mallory.

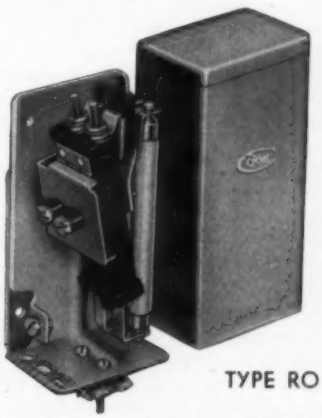
BUY WAR BONDS TODAY

COOK
SUB-STATION PROTECTORS

TYPE O

The Type O single circuit protector, equipped with one pair of fuses and one pair of high potential dischargers are unexcelled for both indoor and outdoor use.

O-7 with A-7 Wood fuses
O-9 with A-9 Lavite fuses
O-12 with A-12 Lavite fuses
O-44 with A-44 Wood fuses



TYPE RO

The Type R Sub-station Protector Mounting is available for two applications: Type RO for outside mounting is equipped with bracket and heavy zinc weather-proof hood and the Type RI (without hood) is for inside mounting. (Type R uses Type H Protector Mounts)

In stock for immediate shipment.

BUCKEYE
TELEPHONE & SUPPLY CO.
COLUMBUS, OHIO

by MAYME WORKMAN
traffic supervisor
the Illinois Telephone Association
and traffic editor

THE OPERATOR'S CORNER

"WHAT ARE you doing, my telephone maid?" "Mending switchboard plugs," she said. Yes, she was doing just that. Being aware that she is secretary to the plant superintendent in the telephone exchange where she is employed, the writer questioned her further and learned that she has assumed a number of the duties formerly assigned to the switchboard repairman who is presently employed by Uncle Sam. The young lady stated, "I repair and change cords on headsets, replace worn cushions, clean the key pans once a month, shellac wire in the cables, polish plugs, and do other routine work. We polish our plugs with sleeving treated with Doe's Polishing Paste and kerosene once every three months. At other times, we use plain sleeving to clean and polish them."

"Do you like this work?" queried the writer. "Oh, yes, indeed," the young woman replied. "Every day when I come to work, I don't know what I am going to do next, so I never get bored." Judging from her friendly smile and the manner in which she proceeded with her work, it was evident she is really enjoying her job of "pinch-hitting" for a fellow employe in the service.

With so many of our young plant men in the armed services, it is a fine gesture on the part of our telephone women to take over some of their responsibilities for the duration, and to do it willingly and graciously. Any task can be made pleasant and interesting if we approach it in the right frame of mind.

All switchboard operators cannot pinch-hit for a plant employe who is busy working for his country, but there is a way in which every operator can serve—that is by handling equipment with care, thus keeping the need for repair and replacement of switchboard cords and plugs at a minimum.

Careless cord handling is probably not a matter of unwillingness to follow the prescribed procedure or indifference to the importance of proper cord handling. It can more likely be attributed to a lack of understanding or appreciation of the result of careless practices.

An interesting and instructive talk on "Switchboard Cords and Plugs," by C. E. Behnke, northern division plant superintendent, Tri-County Telephone Co., presented to a group of traffic employes at Alpena, Mich., revealed some surprising facts relative to switchboard cords and plugs. Mr. Behnke's talk appeared in the *Trico News* of December, 1943. He stated:

"A recent survey of the life of switchboard cords and plugs in the Alpena office showed that the average new cord will last about two months before it is necessary to rebutt it, during which time it has answered about 10,000 calls. These cords must be even and pliable for smooth operations, and yet of rugged construction, to be able to withstand normal use. The usual point of failure is at the point where the cord enters the plug and they are so constructed that they may be rebutted several times (usually about five) and placed back in service. This rebutting involves re-terminating the conductors of the cord in the plug and usually takes about 45 minutes. It includes removing and replacing of the cord in the switchboard, gauging the plug and rebutting the cord.

"Some of the more common causes of undue wear on the cords are:

"Inserting the plug in the jack by pushing against the end of the plug with the palm of hand—'Get in there, darn you.'

"Removing the plug from the jack by grasping the cord and jerking it out—'C'mere.'

"Scratching the surface of the cord with a fingernail, nail file, pencil or some similar sharp instrument, twisting the plug on the cord or using it as a yo-yo, whirling the plug in the air and making the cord twist around your finger.

"All of the above things have been observed and are subject to occur in the operator's idle (if she has any), nervous moments and even though the cords are of rugged construction, they are not indestructible. This type of usage will shorten the life of the cord by as much as 75 per cent (or to 2,500 answers).

"The average life of a plug, under normal wear, is about 25,000 calls. These cannot be repaired and their usual failure is due to normal wear. They must be measured frequently by means of a special gauge, and are not practical to give good service after 7½ thousandths of an inch is worn off their outside diameter. Occasionally, and sometimes too frequently, these plugs are damaged by misuse, the tip of the plug being bent or broken when it is being placed or removed from the jack.

"As cords and plugs are both made of material that is critical to the war effort and are hard to obtain, it is now more important than ever that they be handled properly and with the utmost care."

Questions from Illinois Operators

(1) When should the question, "Do you wish him personally?" be asked?

(2) Where is a room number entered on the toll ticket?

(3) When should "rel (time)" be entered on a toll ticket?

(4) Why is it necessary to pass a ticket when the charge is to a third number?

(5) Should we take a "ticket locate" in care of residences?

The answers to these traffic questions are presented on page 32.

V V

H. F. McCulla Completes 30 Years' Service

Herbert F. McCulla, general commercial superintendent of the Lincoln (Neb.) Telephone & Telegraph Co., has just completed 30 years of service in the telephone industry.

His first employment, at the age of 16, was with the former Hastings (Neb.) Independent Telephone Co. His initial job was that of night switchboard operator at a time when only men were available for that task. When the Lincoln company purchased the exchanges at Lincoln and Hastings, Mr. McCulla continued in maintenance work at Hastings. Later he became wire chief and commercial manager. In 1923 he was transferred to Lincoln, where he became assistant to W. E. Bell, general commercial superintendent, and in 1934 he succeeded Mr. Bell in that position.

V V

"Captured" After Sleep To Fame

One telephone installer, so the legend goes, achieved a degree of notoriety by falling asleep.

He had worked about 40 hours at a stretch, putting in emergency service for the War Department in Washington, D. C. His last job was to attach wires to a connecting block under a desk. Exhaustion and a soft rug were too much. He fell asleep. A few hours later he was awakened by a guard who was sure he had captured a spy.

"If," his associates explained, "he'd picked any other desk in Washington to sleep under, it might have been different. But this was General Marshall's desk."

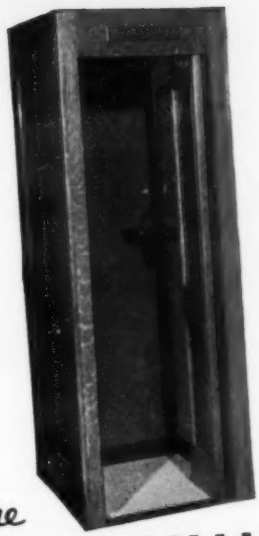
V V

Appointed Board Member

C. L. HURT, manager of the Schuyler (Neb.) exchange of the Northwestern Bell Telephone Co. was recently appointed a member of the city board of public works. Mr. Hurt has been in charge at Schuyler since 1926.

IN 1944
BUY BONDS
FOR VICTORY

STROMBERG-CARLSON
RECOMMENDS—



The CHURCHILL
TELEPHONE BOOTH
with
Automatic Electric Ventilator

Standard equipment on the CHURCHILL No. 100 Folding Door Telephone Booth is an automatic electric ventilator that keeps fresh air in the booth. An electric light makes reading or writing messages, telephone numbers, etc. easy. With such conveniences for your customers, watch your pay station business climb.

The CHURCHILL Booth is constructed as a single unit and equipped with a reinforced back panel for mounting a wall telephone or coin collector.

Made of selected white oak, available in light or medium oak in a satin finish.

Overall height is 84¾"; width, 29"; depth, 30½". Shipped knocked down and crated.

Illustrated literature available

HEMINGRAYS SAVE MONEY

. . . because they outlive poles

Hemingrays are the result of a secret glass "batch-mix," the climax of 88 years experience, plus Owens-Illinois quality-controlled production. That is why Hemingrays are free of voids, stresses and strains . . . why sudden changes of temperature leave them unimpaired.

Hemingrays frequently outlive poles, hardware, and cross-arms and for that reason are easy on the operating budget.

Recommended for Rural Lines:

Hemingray all-purpose No. 16; Hemingray No. 42—its long leakage path keeps toll lines trouble-free; Hemingray No. 9—a drip point petticoat for fast moisture run-off.

STROMBERG-CARLSON COMPANY
Factory and General Offices: Rochester 3, New York, U. S. A.
Branch Offices: Chicago, Kansas City, San Francisco, Toronto

NEW ORDER ISSUED ON "LEARNER" WAGE RATES

THE Wage & Hour Division of the U. S. Department of Labor on June 26 issued a new regulation liberalizing, to some extent, the learner period during which less than 40 cents an hour may be paid to apprentice operators in certain Independent telephone exchanges.

The regulation provides that upon application to the Wage-Hour Administrator special certificates authorizing the employment, at sub-minimum wage rates, of learners may be issued to exchanges of less than 2,000 stations to the extent necessary to prevent curtailment of opportunities for employment, and to exchanges of 2,000 or more stations when unusual circumstances are shown to exist which would curtail opportunities for employment under terms set forth in the regulations.

The complete text of the learners period regulation follows:

Title 29—Labor

Chapter V—Wage & Hour Division
Part 522—Employment of Learners Independent Telephone Industry

Sec.

522.081 Scope of the regulation.
522.082 Issue of special certificates.
522.083 Number of learners.
522.084 Learning period.
522.085 Learner hourly rates.
522.086 Duration of certificates.
522.087 Provisions of learner certificates.
522.088 Revocation of special certificates.
522.089 Notice of issuance or cancellation of special certificates.
522.090 Definitions.
522.091 Records to be kept.
522.092 Employment of experienced workers as learners prohibited.
522.093 Employment of learners prohibited when experienced workers are available.
522.094 Status of certificates issued under existing regulations.

AUTHORITY: §§ 522.081 to 522.094, inclusive, issued under 52 Stat. 106P; 29 U. S. C. 214.

The following regulations, Part 522, §§ 522.081 to 522.094 (regulations applicable to the employment of learners in the Independent telephone industry pursuant to section 14 of the Fair Labor Standards Act of 1938), are hereby issued. These regulations amend and supersede regulations, Part 522, §§ 522.081 to 522.090 (regulations applicable to the employment of learners in the Independent telephone industry), published in the FEDERAL REGISTER on September 27, 1940.

§ 522.081 *Scope of the regulations.* The following provisions shall be applicable to the employment of learners in the Independent telephone industry and are supplemental to regulations, Part 522 (regulations applicable to the employment of learners pursuant to section 14 of the Fair Labor Standards Act of 1938), as amended.

§ 522.082 *Issue of special certificates.* Upon application to the administrator of the Wage & Hour Division, on forms furnished by the division, special certificates authorizing the employment, at sub-minimum wage rates, of learners in the Independent telephone industry may be issued to exchanges of less than 2,000 stations to the extent necessary to prevent curtailment of opportunities for employment, and to exchanges of 2,000 or more stations when unusual circumstances are shown to exist which the administrator or his authorized representative find would curtail opportunities for employment, under terms herein set forth, when it appears that:

(1) Experienced operators are not available in the locality from which the employer customarily draws his labor supply;

(2) The issue of a certificate will not tend to impair working or wage standards established for experienced operators in the industry; and

(3) The issue of such certificates will not create unfair competitive labor cost advantages.

§ 522.083 *Number of learners.* (a) Special certificates issued to meet normal labor turnover may authorize not more than:

One learner in exchanges employing up to eight operators, or

Two learners in exchanges employing nine to 18 operators, or

Three learners in exchanges employing 19 to 30 operators, or

Four learners in exchanges employing 31 to 44 operators.

In exchanges employing 45 or more operators, learners in addition to four may be employed at less than the minimum rate in the ratio of one learner for each additional 15 operators employed in the exchange.

(b) Special certificates issued to new or expanding exchanges may authorize the employment of the number of learners required to meet the employer's actual need in such exchanges.

(c) Special certificates issued to meet abnormal labor turnover resulting from the war emergency may authorize the employment of learners to the extent of the actual need of an individual applicant.

§ 522.084 *Learning period.* The maximum learning period which may be provided under a special certificate issued in this industry shall not extend beyond the first 480 hours of employment in training for and in switchboard operating.

§ 522.085 *Learner hourly rates.* The minimum hourly rate to be provided in a special certificate for learners shall be not less than 30 cents per hour for the first 320 hours and 35 cents per hour for the second 160 hours of the learning period.

§ 522.086 *Duration of certificates.* Special certificates authorizing the employment of learners in accordance with paragraph (a) and (c) of § 522.083; may be issued for a period not longer than one year unless sooner revoked for cause. Special certificates authorizing the employment of learners in accordance with paragraph (b) of § 522.083, may be issued for a period not longer than necessary to complete the training of the total number of additional learners required and may not be used for purposes of meeting regular turnover requirements.

§ 522.087 *Provisions of learner certificates.* All special certificates shall include, among other matters, the learner occupation; length of learning period; and rate set forth hereinabove; the definition of a learner; the purpose for which issued; the period during which the certificate remains in effect; the requirement that the certificate shall be posted continuously during its validity in a conspicuous place in the plant where the learners are to be employed; and a prohibition against the violation of any of the terms and conditions set forth in the certificate.

§ 522.088 *Revocation of special certificates.* (a) Any special certificate may be canceled if it is found that it is not necessary to prevent a curtailment of opportunities for employment. In the absence of fraud or misrepresentation learners already hired under a special certificate may be retained under the terms of the certificate if the learning period extends beyond the date on which the certificate has been canceled.

(b) Any special certificate shall be canceled as of the date of issue if it is found that the certificate has been obtained by fraud or misrepresentation. When a certificate has been obtained by fraud or misrepresentation the employer shall be liable to the employe for wages established by the act as if no certificate had been issued.

(c) Any special certificate shall be canceled as of the first date of violation if it is found that any of its terms have been violated, and the employer shall be liable to those employed under such certificate, from the date of viola-

(Please turn to page 32)

CORRECTION

In the article "40-Cent Minimum Wage Order for Industry" on page 24 of the July 1 issue of TELEPHONY, it was stated, "The order affects all telephone companies having 500 or more stations. Companies having less than 500 stations are exempt from provisions of the federal Wage-Hour law . . ."

This is erroneous as the Wage-Hour exemption applies to *exchanges* and not to companies. The Wage-Hour law does affect employes of all telephone exchanges with the exception of operators in exchanges having less than 500 stations. Such employes are the only ones exempt from the Wage-Hour law, therefore, they are exempt from the 40-cent wage order.

WIN POSTWAR GOODWILL

NOW!

No matter how many times people are told that the shortages are due to the war, many of them hold it against the firm that says "NO!" You can't supply most private telephones, but you can supply pay stations.

Wherever the war has brought more people than were there in 1939, there's a need for telephone service. If you don't give it with pay stations—the only way you can give it now—you may create bad will.

How long is it since you've made a canvass of the busy neighborhoods in your area to find new, profitable locations for pay stations? Here's an opportunity to educate non-subscribers to telephone use, and at the same time supply badly needed service.

✓ *Pay stations are available on your priority, and Gray Pay Stations may be bought from any one of the agents listed below. Write for a complete catalogue showing all types of modern pay station equipment.*

THE GRAY MANUFACTURING COMPANY

MAKERS OF TELEPHONE PAY STATIONS SINCE 1891

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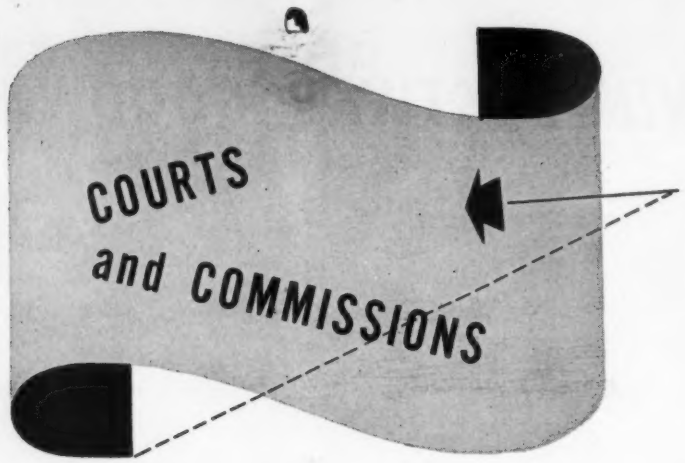
Authorized Agents: AUTOMATIC ELECTRIC SALES CORP. • GRAYBAR ELECTRIC COMPANY • KELLOGG SWITCHBOARD & SUPPLY COMPANY • LEICH SALES CORPORATION • THE NORTH ELECTRIC MFG. CO. • STROMBERG-CARLSON COMPANY • AUTOMATIC ELECTRIC (CANADA), LIMITED • NORTHERN ELECTRIC CO., LTD.



Minnesota Commission Needs New Name, Says Member

The Minnesota Railroad & Warehouse Commission, whose functions include regulation of telephone companies, should be given a new name, in the recent opinion of one of its three members, Rollin G. Johnson.

"No department of our state government," he said on June 21, "determines policies and makes decisions affecting the lives and fortunes of so many of our people as does the misnamed Railroad & Warehouse Commission.

"State Public Utilities Commission or State Public Service Commission would be a title better conveying the idea of our duties, and even that title would be inadequate."

Commissioner Johnson indicated that irrespective of whether or not he is re-elected as a commission member this year, he will recommend that the 1945 Minnesota legislature give the agency a new name.

V V

Hoax Cost High On Utah Telephones

You can be sentenced to five years in prison and fined $1,000 for telling a lie over a telephone in Utah.

State Attorney General Grover A. Giles recently reported this maximum punishment after someone telephoned a Mrs. J. B. Crane—as a joke—and said that her son had been killed. Just before hanging up, the prankster admitted there was no truth to the statement.

V V

Minnesota Company Granted Rate Increase

The Hanska (Minn.) Rural Telephone Co. was authorized on June 22 by the Minnesota Railroad & Warehouse Commission to put into effect upon the first billing date following June 30, 1944, its proposed increased rates and charges. (TELEPHONY, June 3, page 28.)

The Hanska company which is a corporation serves approximately 119 local and 260 rural stations. The book cost of the telephone property useful in rendering telephone service was entered at $22,685. An income statement showing operating revenue, operating expenses, taxes and net income under the present and proposed rates was submitted. The present rates were found unreasonable, therefore the proposed rates were accepted.

V V

Local Interests Buy Small Oklahoma Company

B. Richardson, telephone engineer for the Oklahoma Corporation Commission, was advised recently that local interests who bought Elie N. Chastel's Quinlan (Okla.) Switchboard Exchange have found an experienced telephone man to keep the property in operation.

The Oklahoma commission, on February 19, had authorized the Quinlan exchange to discontinue operating on April 1, providing Mr. Chastel could not dispose of it. (TELEPHONY, March 4, page 24.) Mr. Chastel asked for permission to close the exchange because of insufficient revenue and difficulty in finding experienced help. Mr. Richardson had assisted the owner in finding the local, financial interests who would take the exchange over until an experienced telephone man was found.

V V

Asks Permission to Close Oklahoma Independent

Manager A. C. Arnold recently filed application with the Oklahoma Corporation Commission for permission to close his Grainola (Okla.) Telephone Exchange at Lyman, according to a report from B. Richardson, telephone engineer for the commission.

Mr. Arnold stated that his revenue is not sufficient to enable him to remain in business at Lyman. In view of this, a few oil company subscribers have arranged to use a pay-station belonging to the Southwestern Bell Telephone Co.

V V

Commission Authorizes Higher Rates for Independent

The Oklahoma Corporation Commission recently ruled that H. H. Harris will be permitted to collect higher rates at his Duke (Okla.) Telephone Exchange as soon as he completes improvements that enable him to give his subscribers reasonable service, and that satisfy B. Richardson, telephone engineer for the commission. (TELEPHONY, June 10, page 32.)

Following the recommendations of Paul H. Reed, referee who heard the case, the Oklahoma commission authorized the following new monthly rates: One-party, residence (wall), $1.75; one-party, business (wall), $3.00; multi-party, rural (company owned), $1.50; multi-party, rural switched (subscriber owned), 60 cents, with a minimum of $1.75 per line. Desk sets, 25 cents per month additional.

Mr. Harris has connected some rural telephones, owned by subscribers, to lines which he owns in part. For these instruments he may collect 83⅓ cents per month, payable quarterly.

The $1.50 per month company-owned, rural line charge is based on an average of one-half mile of line per subscriber. A further charge of 25 cents for each additional mile or fraction thereof was authorized.

V V

Commission Suspends Proposed Rates

The Pennsylvania Public Utility Commission on June 27 suspended for six months, pending investigation, proposed new rates filed by the Northeastern Pennsylvania Telephone Co.,

Forest City, Pa., operating in portions of Lackawanna, Susquehanna and Wayne counties.

The new rates, scheduled to have become effective July 1, would have dropped charges of 25 and 50 cents for desk and hand sets, respectively, and proposed the following increases: One-party business line, from $2.50 to $3.50, monthly; multi-party business, $1.50 to $2; one-party residence, $2.50 to $2.75. Service connection charges of $1, $2 and $3 were also proposed.

The company said the proposed increases were necessary to offset dropping of charges for desk and hand sets.

The commission said the Office of Price Administration asked leave to intervene in the case.

V V

"Service Charges" on Trial In Government Suit

Trial of a government suit to enjoin New York hotels from collecting "service charges" on interstate telephone calls made by guests was begun June 26 before Judge Stephen Brennan in the federal court at New York.

The suit is based on the contention that such extra charges are in violation of Federal Communications Commission regulations that provide fixed rates for toll calls. (TELEPHONY, January 29, page 28.)

V V

Summary of Commission Rulings and Hearings

Federal Communications Commission

June 29: Granted modification of license to the American Telephone & Telegraph Co., Long Lines department, Dixon, Calif., to cover construction permit for an additional transmitter for point to point telephone station.

Kansas State Corporation Commission

May 29: Hearing set for July 10 on application of the Grainfield Telephone Co. for authority to make certain rate changes for telephone service at Grainfield and Gove, and discontinue free service between these two points, charging a flat rate of 10 cents per call.

California Railroad Commission

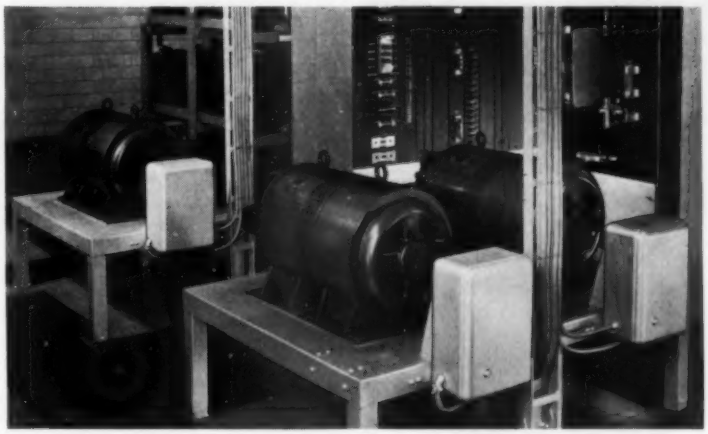
June 23: First supplemental application filed by James J. Dulcich seeking authority to assign to Charles W. and Dorothy E. Roome all assets of the Mariposa Telephone Co. for $5,000.

V V

Appointed Area Manager

GEORGE D. BROCK, telephone manager of the Friend exchange of the Lincoln (Neb.) Telephone & Telegraph Co., was recently appointed Wilber (Neb.) area manager for that company. He succeeds TYLER RYAN who enlisted in the service a few weeks ago.

THE DIVERTER POLE MOTOR-GENERATOR

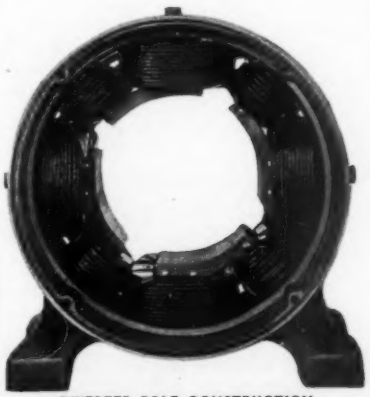


Greatly Increases Battery Life and Efficiency

To insure long battery life and high operating efficiency with the floating charge of Telephone Exchange Batteries, the charger must have certain specific characteristics—

Vitally important among these essential characteristics inherent in the DIVERTER POLE GENERATOR are:—

- Automatic constant charging voltage that insures control of the exchange voltage within very close limits for 24 hour duty.
- A continuous floating charge to the battery at all times which alone will insure highest efficiency, longest life and lowest maintenance.
- Freedom from any characteristics of "running away" or reversal of polarity in case of power discharge from the battery into the generator.
- An elimination of any manual attention of the charging, resulting in increased battery life.
- Mechanically and electrically quiet.



DIVERTER POLE CONSTRUCTION

These characteristics plus generous precision design, quiet operation and minimum maintenance are some of the reasons why DIVERTER POLE GENERATORS are delivering long trouble-free service for many utilities in all sections of the country and why they are the top investment in battery charging equipment.

WRITE FOR BULLETIN 96
GIVING COMPLETE DETAILS

The Electric Products Co.
1739 CLARKSTONE ROAD · CLEVELAND 12, OHIO

SINCE 1889
NATCO
CLAY CONDUIT

The proved and standard Protection for Underground Telephone Cables.
Cheapest in the long run. Highest quality and a full line of shapes.

National Fireproofing Corp.
202 E. Ohio Street, N. S.
PITTSBURGH, PA.

WHAT'S NEW?

● If you have something new in mind that would increase efficiency and convenience of telephone service for post-war use, let us analyze it's merit and marketing possibilities for you. No charge. We desire to cooperate with operating companies and inventors to design, manufacture and market new items in our modern plant.

NATIONAL ACOUSTIC PRODUCTS
POST-WAR DEPARTMENT
Attention: E. B. Overshiner
120 North Green Street
Chicago (7), Illinois

New Order Issued On 'Learner' Wages

(Concluded from page 28)

tion, for wages established by the act as if no certificate had been issued.

§ 522.089 *Notice of issuance or cancellation of special certificates.* Notice of the issuance or cancellation of each special certificate pursuant to these regulations shall be published in the FEDERAL REGISTER.

§ 522.090 *Definitions.* (a) The Independent branch of the telephone industry as referred to herein includes only those companies which are engaged in the commercial operation of telephone exchanges and which are not owned or controlled by the American Telephone & Telegraph Co. (Bell System) or its subsidiaries.

(b) Learners are persons who have had less than 480 hours of employment in the telephone industry as commercial switchboard operators.

(c) Experienced commercial switchboard operators are persons who have had not less than 480 hours of employment in the telephone industry as commercial switchboard operators. In order to be considered available such persons must be capable of equaling the performance of an operator of average or ordinary skill and experience.

§ 522.091 *Records to be kept.* The name of each learner and occupation in which each is employed shall be entered on the pay roll record of the exchange to which the special certificate is issued. The names of all persons employed as learners shall be listed together in a separate group on the pay roll record.

§ 522.092 *Employment of experienced workers as learners prohibited.* No experienced worker shall be employed under the terms of a special learner certificate.

§ 522.093 *Employment of learners prohibited when experienced workers are available.* No learner shall be employed under a special learner certificate if, at the time such employment begins, an experienced worker who is capable of equaling the performance of a worker of ordinary or minimum skill is available for employment.

§ 522.094 *Status of certificates issued under existing regulations.* Special certificates issued prior to the effective date of this amendment, authorizing the employment of learners at subminimum wage rates in this industry, shall remain in effect until they expire.

The regulations shall become effective on July 17, 1944, and shall continue in force and effect until hereafter modified.

Signed at New York this 22d day of June 1944.

L. METCALFE WALLING,
Administrator.

[F. R. Doc. 44-9315; Filed, June 26, 1944; 12:39 p.m.]

V V

Nebraska Independent To Be Sold at Auction

For non-payment of taxes, the Home Telephone Co., Verdel, Neb., will be sold at public auction at a future date. The sheriff's sale will be on a distress warrant. The telephone system, whose line is owned by Ed Ferguson of Ewing, Neb., operates in northwest Knox county and eastern Boyd county.

The taxes have been about $125 per year. It is believed that that valuation has been too high for the amount of equipment and other data belonging to the system. Little was done to bring the valuation down, however. The Knox county board of equalization asked Mr. Ferguson to discuss the matter but no action was taken.

V V

Ex-Service Man Purchases Oklahoma Independent

Kenneth E. Ritter, an honorably discharged ex-service man, recently purchased the salvaged property of the former Wyandotte (Okla.) Telephone Co. and restored service with about 100

Answers to Traffic Questions on Page 26

(1) Say, "Shall I reach him personally?" when the details of the call do not clearly indicate the class of service desired.

(2) The room number is entered following the calling or called number, or at the right of the called "Tel. No." space, if the number has not been given.

(3) When it is necessary to release the calling party. For example, a case where the operator knows she will not be able to make an immediate attempt on the call due to calls previously filed upon which no attempt has been made.

(4) This practice has been discontinued. The OTC operator reaches the third station and secures the acceptance of the charge.

(5) Ordinarily, no. However, in case of an emergency, such a procedure might be warranted.

telephones, as of June 15, under the company's former name.

Wyandotte is near the head of Grand River Lake in northeastern Oklahoma. The former exchange was so badly damaged by the flooding Grand River last year it was closed.

V V

C. R. Brown Retires; Shepherd Promoted

J. F. O'Connell, Madison, Wis., president, Illinois Commercial Telephone Co., has announced the retirement on July 1 of Clarence R. Brown who for the past 12 years has been vice president and general manager of that company with offices at Springfield, Ill. Louis F. Shepherd, Madison, personnel director, central group office of General Telephone System, has been appointed as successor to Mr. Brown.

C. R. BROWN

Mr. Brown has been identified with the telephone industry for more than 40 years. Upon graduation from Knox College, Galesburg, Ill., he entered the employ of the Bell System in 1900 as a troubleman, later being advanced to plant inspector and switchboardman. After several years' service with the Bell System, he entered the Independent field where he has had very diversified experience holding many executive positions, among which are: Chief engineer, Sterling Electric Co.; assistant to general manager, Holtzer-Cabot Co.; sales manager, southwestern branch of Johns-Manville Co., and sales engineer, Kellogg Switchboard & Supply Co.

On November 1, 1920, he accepted the position of chief engineer of the Commonwealth Telephone Co., Madison, which is now a part of the General Telephone System. He was later appointed chief engineer of the central and eastern group companies of that system operating in the states of Wis-

SOLOMON
would have had a gay time phoning his thousand wives!
Or would he???
Line troubles come frequently enough from sources beyond our control.
LongLife Drop Wire puts troubles from saturant failure in the remote future.
LongLife DROP WIRE
Distributed by GraybaR
WB
THE WHITNEY BLAKE CO.
New Haven, Conn.
Well Built wires since 1899

MASTER RINGING CONVERTERS
ARE DISTRIBUTED BY
AUTOMATIC ELECTRIC
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ALL the strength and durability inherent in steel are combined—with definite economies—in *Crapo* Galvanized Steel Strand. Heavy, ductile, tightly-bonded zinc coatings, applied by the famous *Crapo* Galvanizing Process, provide lasting protection against corrosion.

Ask the distributor of *Crapo* Galvanized Products near you or write direct for further information!

INDIANA STEEL & WIRE CO.
MUNCIE, INDIANA

Murdock

TELEPHONE SETS

Strong, Durable—Smartly Styled

This graceful Base is attractively designed for apartment and inter-office use. Ruggedly made of molded black bakelite; metal bottom, rubber feet. Built-in on-off switch.

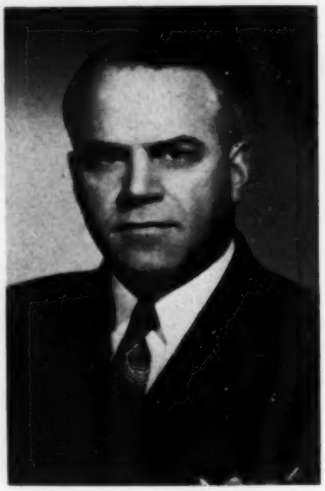
Murdock Telephone Plugs are precision-machined, well-insulated—built to *last*. Standard type, brass with black molded sleeve. $2\frac{7}{16}$" long overall; plug tip $\frac{1}{4}$" diameter, .776" long.

Write for Catalogue of Murdock Telephone Sets, Plugs, Push Buttons, Connection Blocks and Radio Phones.

WM. J. MURDOCK CO.
147 Carter St., Chelsea 50, Mass.

consin, Iowa, Missouri, Illinois, Michigan, Indiana, Kentucky, Ohio, Pennsylvania and New York.

From 1930 to 1932, Mr. Brown was vice president in charge of operations for the central group operating companies of the General system, which



L. F. SHEPHERD

consisted of the properties in the states of Wisconsin, Iowa, Missouri, Illinois, Michigan, Indiana and Kentucky. On May 1, 1932, he was appointed vice president and general manager of the Illinois Commercial Telephone Co. and has continued since that date in the same capacity.

At the time of his retirement, Mr. Brown was also president of the Pike County Telephone Co., Pittsfield, Ill., and vice president and general manager of the Central Illinois Telephone Co. and the Illinois Standard Telephone Co., all of which are a part of the General Telephone System. Mr. Brown has been a director of the Illinois Telephone Association for the past 12 years, serving as the association's president for two years. At the time of his retirement, he was also a director of the Independent Toll Clearing Co., Inc., Springfield, Ill.

During his long period of association with the industry, he has made a host of friends. For the present, Mr. Brown and his wife will continue to maintain their residence at Springfield.

Mr. Shepherd, who will succeed Mr. Brown, was born at Freeport, Ill. in 1904, attended Harlem High School, Rockford, Ill., and the University of Illinois. He began his telephone work as a groundman with the former Winnebago Telephone Co. at Rockford, and first became associated with the properties of the General Telephone System 18 years ago when he was employed by the former Belvidere (Ill.) Telephone Co. September 1, 1926, as an apprentice station repairman. He worked in the maintenance and construction departments for the next two years and had been advanced to wire chief at Belvidere when he was transferred to the Mineral Point (Wis.) exchange of the Commonwealth Telephone Co. as local manager. After serving two years as local manager, he was transferred to the system's group office at Madison for training in traffic engineering work.

On August 1, 1930, Mr. Shepherd was appointed traffic superintendent of the Illinois Commercial Telephone Co. and continued in that capacity until 1935 when he was transferred to Madison and made general traffic superintendent for the five central group operating companies of the General Telephone System.

Since 1935, he has successively held the positions of general traffic superintendent, general commercial superintendent, and personnel director for this group of companies. Mr. Shepherd is also vice president and a director of Commonwealth Telephone Co. He has been active in both state and national telephone association work.

V V

Fourth Production Honor Is Won by Habirshaw

The Habirshaw Division of the Phelps Dodge Copper Products Corp. at Yonkers, N. Y., has been awarded a third renewal of the Army-Navy "E" award by the Navy Board of Production Awards, Wylie Brown, president of the corporation announced recently.

The original "E" pennant was awarded at ceremonies August 12, 1942. The first renewal was made March 12, 1943, and the second renewal was made December 6, 1943.

Adm. C. C. Bloch, U. S. Navy, chairman of the board, gave high praise to the Habirshaw plant in a letter to Mr. Brown announcing the award.

In acknowledging Admiral Bloch's announcement, Mr. Brown said:

"We can assure you that the men and women of our Habirshaw Division are proud indeed to be once again the recipients of this high honor."

V V

Raasch and Leach Named by Copperweld

The Copperweld Steel Co., Glassport, Pa., made the following announcement on June 22 through William W. Ege, general manager of sales:

Roy C. Raasch, formerly of the Chicago office, has been transferred to

ROY C. RAASCH

Cleveland, Ohio, where he will assume charge of that office, which is located at 1158 Union Commerce Building. He supplants E. N. Hazlett, who has left the company. Mr. Raasch has been associated with the Copperweld organization for the past eight years. Before that he was in the engineering department of the Public Service Co. of Northern Illinois. He is a graduate of Iowa State College, Ames, Iowa, where he received his degree in electrical engineering.

A. B. LEACH

A. B. Leach will take over the assignments previously handled by Mr. Raasch in the Chicago office. He formerly represented the Copperweld Steel Co., in the St. Louis area. Mr. Leach is a native of the latter city, where he completed his high school training. He was given his technical education in the electrical engineering school at Purdue University. Prior to being affiliated with the Copperweld organization in 1938, he was associated with the Kansas Power Co. at Dodge City, Kan., and later with the G. L. Tarlton Construction Co., St. Louis.

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Methods of making pole line hardware may change. Supply varies. But, in Line Material Hardware there's one constant, unchanging feature . . . QUALITY!

Nowadays that's particularly important. Why? Because that consistent high quality that's built into L-M products cuts down on replacements. It helps save metal by doing so . . . it helps save machinery . . . it helps save labor.

Quality isn't something new to Line Material Hardware . . . something that grew out of circumstances that make extra care necessary. It's something that's been in every piece of L-M Hardware for over 30 years . . . anchor rods, bolts, clamps, guards and all the other members of that big, famous family.

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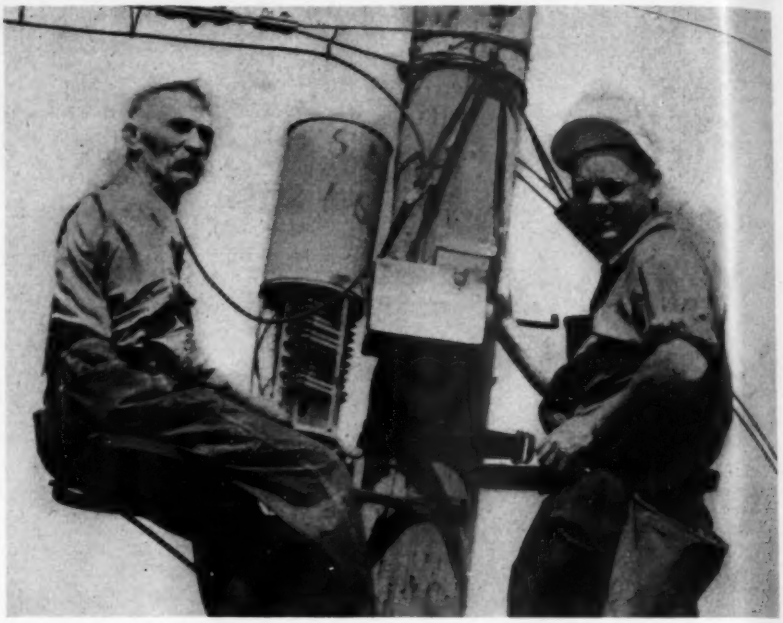
Solving the Manpower Shortage



The spirit of public service by telephone employes during the wartime manpower shortage is exemplified by Sam Rinehart, 82-year-old telephone lineman of Ogden, Iowa, who has resumed work for the Marcy Mutual Telephone Co. The Ogden *Reporter* pays tribute to Mr. Rinehart as follows:

"Sam Rinehart, 82-year-old Ogden citizen, is helping solve the manpower shortage for the Marcy Mutual Telephone Co. and the town of Ogden these days, while all the younger men are serving in the armed forces.

"Sam, shown seated at the end of the local telephone company's north cable with Pat Rundberg, regular troubleman for the company, keeps busy all five days of the week, in spite of his 82 years and according to Claude Shaffer, the company manager, if all the other "young-old" men of the community would pitch in and help like Sam does we wouldn't have a thing to worry about when it comes to help . . .

"In addition to working every day of the week for the telephone company, Sam helps out one or two evenings each week "subbing" for the night marshal on his night off. Hats off to Sam, say we, who find it increasingly difficult to find sufficient help to print the *Reporter* each week."

National Carbon Sales Handled from Seven Offices

A new sales set-up under which all company products will be handled nationally from seven divisional offices is being installed by National Carbon Co., Inc., it was announced recently. Four of the new offices are in operation and the others will be added by October 1.

All sales activities in the Southeast have been consolidated under a new Atlanta division office. J. F. Warnell, former manager under the "district" system, and recently stationed at New York, has returned to Atlanta as division manager. Assistant manager is C. J. Chapman, who has been in company sales for the last 10 years, and W. R. Peppard is office supervisor. The organization is using the former district address—41 Marietta St., Atlanta 3, Ga. This division will comprise, in addition to Georgia, the states of Virginia, North and South Carolina, Alabama, Florida and most of Tennessee.

C. C. Joslyn is manager of the new Dallas, Tex., division. He has been with the sales organization of the company for more than a decade. The assistant manager is J. L. Mullen, recent district manager at Atlanta, and J. F. Uhl is office supervisor. The former Dallas district offices at 200 South Ervay St., Zone 1, have been retained. This division will comprise, in addition to Texas, the states of Kansas, Oklahoma, New Mexico, Mississippi, Louisiana and part of Tennessee.

At Kansas City, Mo., A. C. Bryan has taken over as division manager. He

has been with the company for 10 years as salesman and sales executive. E. L. Dibble, former manager of the district there, is the new assistant manager. C. H. Wade is supervisor of the new offices, which occupy the same location, 19th and Campbell Sts., Kansas City, 8. The division will comprise, in addition to Missouri, the states of Kansas, South Dakota, Wyoming, Nebraska, Colorado, western Illinois, and most of Iowa.

On the west coast, R. P. Tolles, manager of the former Pacific Coast division, succeeds to the direction of the new San Francisco organization. Assistant managers are A. R. Miller, former district manager at Portland, Ore., and O. B. Rendahl. The new division staff will occupy the old address at 114 Sansome St., San Francisco, 4. From this headquarters will be directed sales in California, Washington, Oregon, western Montana, Idaho, Utah, Arizona and Nevada.

The three division offices yet to be opened will be located at Chicago, Pittsburgh and New York. Much enlarged staffs will be active in all the division headquarters, with the personnel made up of specialists and salesmen of long experience in all National Carbon lines. While the new system gives the division heads responsibility for sales of all company products, "Eveready" distributors and dealers will be served by men who give their whole time to "Eveready" products.

V V

Koppers Installs New Illinois Dry Kiln

A lumber dry kiln is being installed at the Koppers Co. Carbondale, Ill., plant and should be in operation about the middle of July according to announcement of W. F. Munnikhuysen, vice president of the company's Wood Preserving Division, which has 21 wood preserving plants throughout the country. The kiln is a Moore reversible cross circulation type, size 22 by 40 feet, and will take a maximum charge of 50,000 board feet.

Installation started in May and, when completed, will round out the plant's facilities which include equipment for woodworking and fabricating lumber before treatment, and cylinders for pressure-treating lumber with creosote, Wolman salts, chromated zinc chloride, pentachlorophenol and fire protection chemicals.

British Admiralty's Telephone Service Moved In Record Time

Recently the British Admiralty delegation moved from a government building to a new location. This included moving a large switchboard vital to the war, and providing telephone service at two locations simultaneously so that an individual could be reached quickly at either place.

The complete moving job was done in a period of 10 days, during which time not one call was lost. The telephone company received a commendation from the British Admiralty in which they expressed appreciation "for a job well done."

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POLES

B. J. Carney & Co., 100 N. 7th St., Minneapolis, Minn.—Western red cedar poles. Pentrex Butt Treated or Plain.

C. M. Christiansen Co., Phelps, Wis.—Northern White Cedar Poles, plain or butt treated. Quotations on request.

International Creosoting and Construction Co., Galveston, Texas.—Creosoted Southern Yellow Pine Poles. Plants: Beaumont and Texarkana, Texas.

MacGillis & Gibbs Company, Milwaukee, Wis.—Northern White and Western Red Cedar Poles. Plain or butt-treated. Immediate quotations on request.

T. M. Partridge Lumber Co., Minneapolis, Minn.—Northern White—Western Red Cedar Poles. Plain or butt-treated.

Pensacola Creosoting Company, Pensacola, Fla. — Creosoted Southern Pine Poles of Superior Long Leaf Quality.

Valentine Clark Corporation, 2516 Doswell Ave., St. Paul, Minn.—Finished Cedar Poles. Plain or butt-treated.

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HELP WANTED

SUBJECT TO prior sale the following used equipment, in good operating condition, is offered F.O.B. storeroom in Butler, Pa.

(a) 1 Kellogg magneto switchboard 12 lines, 3 trunks, 3 connecting circuits, handset operator's telephone with #23 type A. E. Co. dial—$50.00

(b) 1 Western Electric cordless magneto switchboard, 10 lines, 5 trunks, 3 connecting circuits with desk stand operator's telephone and #23 type dial—$50.00

(c) 1 Type H.D. size 12,300 watt D. C. generator No. 372906 volts 65, speed 1750, amps. 4.6 with 4″ steel pulley. Manufacturer: Holtzer-Cabot Electric Co., for Automatic Electric Sales Corp.—$20.00

(d) 1 Direct connected four cylinder engine and generator. Universal type K. D. serial #8279, complete with American Bosch magneto and Zenith carburetor, governor, and built-in gasoline tank. Manufactured by the Universal Motor Co., Oshkosh, Wis.
#5530 Compound wound generator, volts 65, R.P.M. 1125, 62 amperes. Manufactured for The Universal Motor Co., by Kurz & Root Co., Appleton, Wis.—$500.00

Write or telephone Plant Superintendent, 218 S. Washington St., Butler, Pa. Telephone: Butler 4041.

HELP WANTED

WANTED: Central Office equipment repair man for Strowger Automatic equipment. Exchange operating over 15,000 stations, located in Middle West. Excellent working conditions and wages. In reply furnish complete information as to age, experience, and draft status. Write Box No. 2077, c/o TELEPHONY.

WANTED: Telephone Accountant—qualified to supervise all phases of telephone accounting for Class A companies. Give full information as to age, experience, draft status, etc. Attach small photograph. Write Telephone Services, Inc., 16th Floor, Lincoln Tower, Fort Wayne, Indiana.

WANTED: Combination Plant and Construction Man to assist in operation of five telephone exchanges, 900 stations. Three exchanges equipped with Dial North Electric Boards. Write, Community Telephone Co., Mohall, North Dakota.

WANTED: Starting new crews. Need construction foreman familiar with general outside telephone construction work. Also need linemen. Permanent employment to right man. Age no object if you can produce. Write, Plant Superintendent, Illinois Central Telo. Co., Clinton, Ill.

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2002	2007	2023	2037	2064	2003	2019	2027	2043	2077
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SH	SBG	SGF	TAY	CBE	CEB
SJ	SBH	SGH	TBL	CBM	CEC
SL	SBX	SGJ	TBN	CBY	CEQ
SN	SDE	TB	TBQ	CCC	
SP	SDF	TC	TBU	CCD	
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Many other codes in smaller quantities. Complete relay assemblies, mountings and covers.

BUCKEYE TELEPHONE and SUPPLY COMPANY
COLUMBUS 16, OHIO

E. B. Overshiner Working on Postwar Telephone Products

Ellsworth B. Overshiner, one of the pioneer telephone men of the country whose activities date back to the early days of the Independent industry, is now connected with National Acoustic Products, a Chicago concern which is reported as being one of the largest manufacturers of sound transmission apparatus. All the old-timers in telephone circles remember "E. B." as founder of the Swedish-American Telephone Co., at one time a leading manufacturer of equipment. He was also president of the Dominion Telephone Manufacturing Co., Waterford, Canada.

As a telephone engineer in the early days, Mr. Overshiner was prominent in important developments of the business and took active part in the building of many Independent plants. He was influential in association matters.

In his new connection with National Acoustic Products, Mr. Overshiner is engaged in engineering work on postwar telephone products. His many years of experience in manufacturing and exchange operating give him an opportunity to serve the industry, and his many old friends will be glad to learn of his return to telephone circles.

V V

Independent Owner Buys Second Exchange

W. C. Robertson, owner and operator of the Butler (Okla.) Telephone Co., recently purchased the Apache (Okla.) Telephone Exchange from Darwin Farmer.

The Apache exchange has about 250 telephones. For many years it was owned and operated by C. E. Devin, who, a few years ago, retired from the telephone business.

V V

Obituary

FREDERICK A. GOOD, 76, former chairman and member of the Nebraska State Railway Commission, died June 30 at his home in Lincoln, Neb.

Mr. Good served as commission chairman from 1936 to 1942, but was defeated for renomination in the Democratic primary. During his service he enacted the role of corporation baiter. He sided with the heads of the Rural Electrification Administration in their refusal to pay any part of the costs of transforming rural grounded telephone lines to metallic, or otherwise abating the nuisance of interference where electric lines invaded the territory of telephone companies by paralleling the construction in place.